

AXA XL X/O
C/O Charles Taylor Adjusting
The Minster Buildings
21 Mincing Lane
London
EC33 7AG

Our Ref:

BRC/sp/9002

Date visited:
Date of report:

30th March 2022
7th April 2022

ENGINEER'S PRELIMINARY REPORT

POLICYHOLDER:

CORRESPONDENCE ADDRESS:

135 Dukes Avenue, London
N10 2QD

SITUATION OF DAMAGE:

As above

1. EXECUTIVE SUMMARY

- 1.1 This matter concerns very slight damage (cracking generally less than 1mm in width) as a result of apparent very minor foundation movement in the vicinity of the front elevation between the entrance porch and two storey bay.

Based on a visual inspection the cause appears to be water discharge from the rainwater pipe penetrating into the ground through damaged benching surrounding the gulley/underground pipework.

- 1.2 Typically when the supporting ground beneath a foundation has been affected by such cause, if the drainage is repaired/made good, the soil quickly recovers its strength and long term stability returns requiring for only localised crack repairs and redecorations to be undertaken.
- 1.3 Trial pit/borehole investigations have been arranged and once the results are received we will report regarding causation and appropriate mitigation measures to ensure long term stability.

2.0 DETAILS OF PROPERTY

- 2.1 **Type of building:** Two storey right-hand end of terrace house.
- 2.2 **Date of construction:** 1902
- 2.3 **Foundations:** Traditional strip footings anticipated.
- 2.4 **Walls:** Load bearing masonry
- 2.5 **Roof:** Pitched and tiled
- 2.6 **Floors:** Ground = Part solid/suspended timber.
Upper levels = Suspended timber

2.7 Basement:

None

2.8 Extensions:

Prior to purchase in 2007 a large conservatory was added to the rear.

During recent times a loft conversion has been constructed.

2.9 Structural alterations:

The loft conversion will have included some structural alterations. Such alterations are not relevant to the issue of recent minor cracking.

2.10 Condition:

The property was originally built to a very high standard and has been exceptionally well maintained since purchase by [REDACTED]

2.11 Comments:

None

3.0 DETAILS OF SITE

3.1 Topography:

The site has slight slope downwards from left to right (Photographs 1 & 2).

3.2 Geology:

The British Geological Survey App indicates that the ground comprises London Clay. Possibly, Dollis Hill Gravel Member (sand and gravel) overlays the London Clay.

3.3 Neighbourhood:

Residential

3.4 Drains:

Bearing in mind the age of the property it is likely that the surface water and foul drainage systems are combined.

To the rear right-hand corner there is an inspection chamber to allow access into the drainage to the rear and right-hand side.

An inspection chamber was not noted to the front of the property to allow access to the soil and vent pipe/rainwater pipes to the front elevation.

3.5 Significant vegetation:

The following vegetation was noted to the front of the property:-

Species	Height	Distance	From Where
Pear	10m	9m	Front RH corner
Deciduous	10m	10m	Front RH corner
Bush	3m	2m	Front RH Corner

Bush/hedge 3m 3m To front of bay

Item 1 above is located in neighbour's garden.

Item 2 is located in the Local Authority footpath.

3.6 Comments: None

4.0 HISTORY OF OWNERSHIP

4.1 Freehold Owners:

4.2 Mortgagors:

4.3 Other interested parties:

4.4 Occupiers:

4.5 Date of purchase:

4.6 Details of surveys/valuations:

4.7 Comments:

5.0 DISCOVERY

It is our understanding that the very slight cracking became of concern to [REDACTED] in early 2022.

6.0 DAMAGE TO PROPERTY

6.1 Summary:

This matter concerns very slight damage (cracking generally less than 1mm in width) as a result of apparent very minor foundation movement in the vicinity of the front elevation between the porch and two storey bay.

6.2 Details of Damage:

The damage noted to the property during our visit on 30th March 2022 can be summarised as follows:-

External Damage in the Vicinity of the Front Elevation

- i) Beneath the front ground window to the bay cracking in the order of 1mm in width (Photograph 3). To the left-hand side of the arch above, cracking less than 1mm in width (Photograph 4).
- ii) To the arch to the front entrance door cracking less than 1mm in width (Photograph 5).
- iii) At the junction of the brickwork forming the porch enclosure with the front elevation, we noted cracking less than 1mm in width (Photographs 6 to 8). There was no distortion to the enclosure itself (Photograph 9).

- iv) Paving to the front of the bay had distorted (Photograph 10). [REDACTED] considered this had happened relatively recently.
- v) Distortion had happened to the entrance path and step within the entrance enclosure (Photographs 11 to 13). [REDACTED] advised that such distortion was relatively longstanding. Again, this may or may not be related.

Internal Damage in the Vicinity of the Front Elevation

- i) At ground floor level over the door opening to the wall between the front lounge and the entrance hall, diagonal cracking less than 1mm in width (Photographs 14 & 15).
- ii) At ground floor level to the front elevation, within the vicinity of the internal wall between the front lounge and the hall at its junction with the front elevation, cracking which was fundamentally hairline (Photograph 16).
- iii) At ground floor level a crack below the front bay window in the order of 1mm in width (Photograph 17).
- iv) No cracking was observed at first floor level.

7.0 DISCUSSION

- 7.1 The left-hand side of the front bay has slope downwards (Photograph 18).

This slope is historic and longstanding.

Until the event of recent cracking/foundation movement, the bay has been fundamentally stable in terms of foundation movement.

The cause of this historic longstanding movement could have been:-

- i) Initial settlement soon after construction on made up ground.

It was observed that all the bays to the terrace have similar historic/longstanding distortions which appears indicative of perhaps the foundations to the bays being shallower depth than that to the main houses and perhaps built on made up ground.
- ii) To the bottom of the soil and vent pipe between the entrance porch and the bay, the underground drainage has been replaced in modern uPVC products (Photographs 19 & 20).

Perhaps, many years ago, there was an issue with the underground drainage adjacent to the left-hand side of the bay and this was addressed by localised underground drainage replacement.

- 7.2 We must emphasise that the current issue under consideration comprises very slight cracking indicative of very minor foundation movement.

During our visit we noted that the rainwater pipe was discharging onto damaged cement/sand benching surrounding the gulley/underground pipework (Photographs 19 & 20).

A potential cause of localised foundation movement could be weakening of the supporting soil beneath the foundations as a result of such discharge.

We consider that the situation warrants further investigation to clarify causation and appropriate mitigation measures to ensure long term stability.

8.0 RECOMMENDATIONS

- 8.1 Whilst the cracking that has happened is very slight and appears to be as a result of only very minor foundation movement, we consider that relatively extensive trial pit/borehole investigations are required to have certainty regarding causation and any appropriate mitigation measures to ensure long term stability.

In this respect we would recommend the following:-

- i) A trial pit/borehole should be progressed to the left-hand side of the bay as close as possible to the location of the apparent foundation movement and the soil and vent pipe/rainwater downpipe.
- ii) An additional trial pit/borehole should be progressed to the entrance porch construction, again as close as possible to the soil and vent pipe/rainwater downpipe.
- iii) For comparison purposes, a trial pit/borehole should be progressed to the front right-hand corner of the main house to clarify if the foundation depth to the bay/entrance porch construction is at a similar depth as the main house.
- iv) A camera survey of underground drainage should be undertaken.

It would appear that the drainage to the rear and right-hand side of the house can be accessed via a manhole to the rear right-hand corner.

To the front there appears to be no inspection chambers to access the underground drainage serving the soil and vent pipe/rainwater downpipe.

An additional trial pit should therefore be undertaken to access the underground pipework serving the soil and vent pipe/rainwater downpipe to the front elevation.

- 8.2 At this stage we do not consider that monitoring is required however the need for monitoring will be reviewed once the site investigation data has been received.

BRET CHAMPION
PYLE CONSULTING